

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: David L. Marvit, et al.
Serial No.: 10/807,572
Filing Date: March 23, 2004
Confirmation No. 3119
Group Art Unit: 2629
Examiner: Regina Liang
Title: *Gesture Based User Interface Supporting Preexisting Symbols*

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
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Dear Sir:

APPEAL BRIEF

Appellants have appealed to the Board of Patent Appeals and Interferences (the "Board") from the decision of the Examiner transmitted March 22, 2007 and an Advisory Action transmitted June 12, 2007, finally rejecting all pending Claims 1-4, 7-11 and 13-21. Appellants filed a Notice of Appeal on June 27, 2007.

Real Party In Interest

This application is currently owned by Fujitsu Limited, as indicated by an assignment recorded on August 2, 2004 in the Assignment Records of the United States Patent and Trademark Office at Reel 015649/0982.

Related Appeals and Interferences

Appellants' have appealed to the Board rejections in U.S. patent application serial no. 10/807,562, which includes similar disclosure as that of the present application. To the knowledge of Appellants' counsel, there are no other known appeals, interferences or judicial proceedings that may directly affect or be directly affected by or have a bearing on the Board's decision regarding this Appeal.

Status of Claims

Claims 1-4, 7-11 and 13-21 are pending in this Application, and stand rejected pursuant to a final Office Action transmitted March 22, 2007 (the "Office Action") and are all presented for appeal. All pending claims are shown in Appendix A, attached hereto, along with an indication of the status of those claims.

The Office Action provisionally rejects Claims 1-4, 7-11 and 13-21 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-21 of co-pending applications 10/807,589 and Claims 1-21 of co-pending application 10/807,560. As these are provisional double patenting rejections, Appellants defer the decision to file a terminal disclaimer or traverse the rejections until the Examiner or the Board indicates that the present application and co-pending applications 10/807,589 and 10/807,560 include allowable subject matter.

Status of Amendments

All amendments submitted by Appellant have been entered by the Examiner.

Summary of Claimed Subject Matter

FIGURE 1 illustrates a handheld device 10 with motion interface capability, in accordance with a particular embodiment of the present invention. Handheld device 10 can recognize movement of the device and can perform various functions corresponding to such movement. Thus, movement of the device operates as a form of input for the device. Such movement input may directly alter what is being displayed on a device display or may perform other functions. Handheld device 10 may comprise a mobile phone, personal digital assistant (PDA), still camera, video camera, pocket calculator, portable radio or other music or video player, digital thermometer, game device, portable electronic device, watch or any other device capable of being held or worn by a user. As indicated in the examples listed above, handheld device 10 may include wearable portable devices such as watches as well. A watch may include any computing device worn around a user's wrist. *(Page 7, Lines 2-13)*

Handheld device 10 includes a display 12, input 14, processor 16, memory 18, communications interface 20 and motion detector 22. Display 12 presents visual output of the device and may comprise a liquid crystal display (LCD), a light emitting diode (LED) or any other type of display for communicating output to a user. Input 14 provides an interface for a user to communicate input to the device. Input 14 may comprise a keyboard, keypad, track wheel, knob, touchpad, stencil or any other component through which a user may communicate an input to device 10. In particular embodiments, display 12 and input 14 may be combined into the same component, such as a touchscreen. *(Page 7, Lines 14-22)*

Processor 16 may be a microprocessor, controller or any other suitable computing device or resource. Processor 16 is adapted to execute various types of computer instructions in various computer languages for implementing functions available within system handheld device 10. Processor 16 may include any suitable controllers for controlling the management and operation of handheld device 10. *(Page 7, Lines 23-27)*

Memory 18 may be any form of volatile or nonvolatile memory including, without limitation, magnetic media, optical media, random access memory (RAM), read only memory (ROM), removable media or any other suitable local or remote memory component.

Memory 18 includes components, logic modules or software executable by processor 16. Memory 18 may include various applications 19 with user interfaces utilizing motion input, such as mapping, calendar and file management applications, as further discussed below. Memory 18 may also include various databases, such as gesture databases and function or gesture mapping databases, as further discussed below. Components of memory 18 may be combined and/or divided for processing according to particular needs or desires within the scope of the present invention. Communications interface 20 supports wireless or wireline communication of data and information with other devices, such as other handheld devices, or components. *(Page 7, Line 28 – Page 8, Line 8)*

Motion detector 22 tracks movement of handheld device 10 which may be used as a form of input to perform certain functions. Such input movement may result from a user moving the device in a desired fashion to perform desired tasks, as further discussed below. *(Page 8, Lines 9-12)*

It should be understood that handheld device 10 in accordance with particular embodiments may include any suitable processing and/or memory modules for performing the functions as described herein, such as a control module, a motion tracking module, a video analysis module, a motion response module, a display control module and a signature detection module. *(Page 8, Lines 13-17)*

In particular embodiments, input movement may be in the form of translation and/or gestures. Translation-based input focuses on a beginning point and endpoint of a motion and differences between such beginning points and endpoints. Gesture-based input focuses on an actual path traveled by the device and is a holistic view of a set of points traversed. As an example, when navigating a map using translation-based input, motion in the form of an "O" may change the display during the movement but may ultimately yield no change between the information displayed prior to the movement and the information displayed at the end of the movement since the device presumably will be in the same point as it started when the motion ends. However, in a gesture input mode the device will recognize that it has traveled in the form of an "O" because in gesture-based input the device focuses on the path traveled

during the motion or movement between a beginning point and an endpoint of the gesture (e.g., even though the beginning and endpoints may be the same). This gesture "O" movement may be mapped to particular functions such that when the device recognizes it has traveled along a path to constitute an "O" gesture, it may perform the functions, as further elaborated upon below. In particular embodiments, movement of the device intended as a gesture may be recognized as by the device as a gesture by matching a series, sequence or pattern of accelerations of the movement to those defining gestures of a gesture database. *(Page 8, Line 18 – Page 9, Line 4)*

FIGURE 17 illustrates example gestures which may be mapped to particular functions. For example, if handheld device 10 comprised a cellular phone, a user may move device 10 in the form of heart 250 to call the user's girlfriend, boyfriend or spouse or house 252 to call the user's home. As another example, if handheld device 10 were a PDA or other device running an application managing files or data, moving the device in the form of C-gesture 254 may be a command for copying data, O-gesture 256 may be a command for opening a file, D-gesture 258 may be a command for deleting data and X-gesture 260 may be an exit command for a file or application. The logical connection between gestures and their intended functions or operations (e.g., "O" for opening a file) further facilitates user interaction and learning. *(Page 44, Lines 17-26)*

Any number of pre-existing symbols may be used as gestures for motion input as commands for performing any number of functions, operations or tasks of a handheld device. Many preexisting gestures typically exist in two dimensions. Handheld device 10 may recognize such gestures. In some cases, for example, handheld device 10 may disable receipt of a particular dimension so that any movement in a third dimension when a user is attempting to input a two-dimensional gesture is not received or detected in order to facilitate recognition of the two-dimensional gesture. In some embodiments, handheld device 10 may receive three-dimensional gestures that may be based on preexisting two-dimensional gestures. Receiving and detecting three-dimensional gestures increases the capabilities of the device by, for example, increasing the number and types of gestures which may be used as motion input. *(Page 44, Line 27 – Page 45, Line 6)*

FIGURE 18 is a flowchart 270 illustrating the utilization of a preexisting symbol gesture, the letter "O," as motion input. As illustrated in step 272, a user moves handheld device 10 in the form of the letter "O." At step 274, handheld device 10 receives raw motion data of the "O" movement from motion detection components and process such raw motion data at step 276 to determine the actual motion of the device. At step 278, handheld device 10 accesses a gesture database 280 which may include a plurality of gestures recognizable by the device to map the motion to the gesture "O." The plurality of gestures of the gesture database may each be defined by a series of accelerations of a movement. The actual motion of the device may be matched to a series of accelerations of one of the gestures of the gesture database. At step 282, handheld device 10 maps the gesture "O" to a particular function by accessing a function database 284 (or a gesture mapping database) which may include a plurality of functions that may be performed by one or more applications running on the device. In particular embodiments, the gesture and function databases may be comprised in memory 18 of the device. The particular function mapped to the gesture "O" may depend on a particular application in focus or being used by the user at the time. For example, in some applications "O" be comprise a command to open a file, while in other applications it may comprise a command to call a certain number. In some cases, one gesture may be mapped to the same function for all applications of the device. At step 286, the device behaves according to the mapped function, such as opening a file. *(Page 45, Lines 7-27)*

With regard to the independent claims currently under appeal, Appellants provide the following concise explanation of the subject matter recited in the claim elements. For brevity, Appellants do not necessarily identify every portion of the Specification and drawings relevant to the recited claim elements. Additionally, this explanation should not be used to limit Appellants' claims but is intended to assist the Board in considering the appeal of this Application.

For example, independent Claim 1 recites the following:

A motion controlled handheld device comprising:
a display having a viewable surface and operable to generate an image
(e.g., Page 7, Lines 9-22);

a gesture database maintaining a plurality of gestures, each gesture defined by a motion of the device with respect to a first position of the device, the gestures comprising symbol gestures each corresponding to a character from a preexisting character set (e.g., Page 7, Line 28 – Page 8, Line 8; Page 8, Line 18 – Page 9, Line 4; Page 44, Line 17 – Page 45, Line 27);

an application database maintaining at least one application (e.g., Page 7, Line 28 – Page 8, Line 8);

a gesture mapping database comprising a gesture input map for the application, the gesture input map comprising mappings of the symbol gestures to corresponding inputs for the application (e.g., Page 7, Line 28 – Page 8, Line 8; Page 8, Line 18 – Page 9, Line 4; Page 44, Line 17 – Page 45, Line 27);

a motion detection module operable to detect motion of the handheld device within three dimensions and to identify components of the motion in relation to the viewable surface (e.g., Page 8, Line 9 – Page 9, Line 4);

a control module operable to load the application, to track movement of the handheld device using the motion detection module, to compare the tracked movement against the symbol gestures to identify a matching symbol gesture, to identify, using the gesture input map, the corresponding input mapped to the matching symbol gesture, and to provide the corresponding input to the application (e.g., Page 7, Lines 23-27; Page 8, Line 18 – Page 9, Line 4; Page 44, Line 17 – Page 45, Line 27);

wherein a set of the inputs map to commands of the application (e.g., Page 44, Line 17 – Page 45, Line 27); and

wherein the symbol gestures are logically associated with names of the commands (e.g., Page 44, Line 17 – Page 45, Line 27).

As another example, independent Claim 9 recites the following:

A method for controlling a handheld device comprising:
generating an image on a viewable surface of the handheld device (e.g., Page 7, Lines 9-22);

maintaining a gesture database comprising a plurality of gestures, each gesture defined by a motion of the device with respect to a first position of the device, the gestures comprising symbol gestures each corresponding to a character from a preexisting character set (e.g., Page 7, Line 28 – Page 8, Line 8; Page 8, Line 18 – Page 9, Line 4; Page 44, Line 17 – Page 45, Line 27);

maintaining an application database comprising at least one application (e.g., Page 7, Line 28 – Page 8, Line 8);

maintaining a gesture mapping database comprising a gesture input map for the application, the gesture input map comprising mappings of the symbol gestures to corresponding inputs for the application (e.g., Page 7, Line 28 – Page 8, Line 8; Page 8, Line 18 – Page 9, Line 4; Page 44, Line 17 – Page 45, Line 27);

loading the application (e.g., Page 7, Lines 23-27; Page 8, Line 18 – Page 9, Line 4; Page 44, Line 17 – Page 45, Line 27);

tracking movement of the handheld device in relation to the viewable surface (e.g., Page 8, Line 9 – Page 9, Line 4);

comparing the tracked movement against the symbol gestures to identify a matching symbol gesture (e.g., Page 7, Lines 23-27; Page 8, Line 18 – Page 9, Line 4; Page 44, Line 17 – Page 45, Line 27);

identifying, using the gesture input map, the corresponding input mapped to the matching symbol gesture (e.g., Page 7, Lines 23-27; Page 8, Line 18 – Page 9, Line 4; Page 44, Line 17 – Page 45, Line 27);

providing the corresponding input to the application (e.g., Page 7, Lines 23-27; Page 8, Line 18 – Page 9, Line 4; Page 44, Line 17 – Page 45, Line 27);

wherein a set of the inputs map to commands of the application (e.g., Page 44, Line 17 – Page 45, Line 27); and

wherein the symbol gestures are logically associated with names of the commands (e.g., Page 44, Line 17 – Page 45, Line 27).

As another example, independent Claim 15 recites the following:

Logic for controlling a handheld device, the logic embodied as a computer program stored on a computer readable medium and operable when executed to perform the steps of:

generating an image on a viewable surface of the handheld device (e.g., Page 7, Lines 9-22);

maintaining a gesture database comprising a plurality of gestures, each gesture defined by a motion of the device with respect to a first position of the device, the gestures comprising symbol gestures each corresponding to a character from a preexisting character set (e.g., Page 7, Line 28 – Page 8, Line 8; Page 8, Line 18 – Page 9, Line 4; Page 44, Line 17 – Page 45, Line 27);

maintaining an application database comprising at least one application (e.g., Page 7, Line 28 – Page 8, Line 8);

maintaining a gesture mapping database comprising a gesture input map for the application, the gesture input map comprising mappings of the symbol gestures to corresponding inputs for the application (e.g., Page 7, Line 28 – Page 8, Line 8; Page 8, Line 18 – Page 9, Line 4; Page 44, Line 17 – Page 45, Line 27);

loading the application (e.g., Page 7, Lines 23-27; Page 8, Line 18 – Page 9, Line 4; Page 44, Line 17 – Page 45, Line 27);

tracking movement of the handheld device in relation to the viewable surface (e.g., Page 8, Line 9 – Page 9, Line 4);

comparing the tracked movement against the symbol gestures to identify a matching symbol gesture (e.g., Page 7, Lines 23-27; Page 8, Line 18 – Page 9, Line 4; Page 44, Line 17 – Page 45, Line 27);

identifying, using the gesture input map, the corresponding input mapped to the matching symbol gesture (e.g., Page 7, Lines 23-27; Page 8, Line 18 – Page 9, Line 4; Page 44, Line 17 – Page 45, Line 27);

providing the corresponding input to the application (e.g., Page 7, Lines 23-27; Page 8, Line 18 – Page 9, Line 4; Page 44, Line 17 – Page 45, Line 27);

wherein a set of the inputs map to commands of the application (e.g., Page 44, Line 17 – Page 45, Line 27); and

wherein the symbol gestures are logically associated with names of the commands (e.g., Page 44, Line 17 – Page 45, Line 27).

As another example, independent Claim 21 recites the following:

A motion controlled handheld device comprising:

means for generating an image on a viewable surface of the handheld device (e.g., Page 7, Lines 9-22);

means for maintaining a gesture database comprising a plurality of gestures, each gesture defined by a motion of the device with respect to a first position of the device, the gestures comprising symbol gestures each corresponding to a character from a preexisting character set (e.g., Page 7, Line 28 – Page 8, Line 8; Page 8, Line 18 – Page 9, Line 4; Page 44, Line 17 – Page 45, Line 27);

means for maintaining an application database comprising at least one application (e.g., Page 7, Line 28 – Page 8, Line 8);

means for maintaining a gesture mapping database comprising a gesture input map for the application, the gesture input map comprising mappings of the symbol gestures to corresponding inputs for the application (e.g., Page 7, Line 28 – Page 8, Line 8; Page 8, Line 18 – Page 9, Line 4; Page 44, Line 17 – Page 45, Line 27);

means for loading the application (e.g., Page 7, Lines 23-27; Page 8, Line 18 – Page 9, Line 4; Page 44, Line 17 – Page 45, Line 27);

means for tracking movement of the handheld device in relation to the viewable surface (e.g., Page 8, Line 9 – Page 9, Line 4);

means for comparing the tracked movement against the symbol gestures to identify a matching symbol gesture (e.g., Page 7, Lines 23-27; Page 8, Line 18 – Page 9, Line 4; Page 44, Line 17 – Page 45, Line 27);

means for identifying, using the gesture input map, the corresponding input mapped to the matching symbol gesture (e.g., Page 7, Lines 23-27; Page 8, Line 18 – Page 9, Line 4; Page 44, Line 17 – Page 45, Line 27);

means for providing the corresponding input to the application (e.g., Page 7, Lines 23-27; Page 8, Line 18 – Page 9, Line 4; Page 44, Line 17 – Page 45, Line 27);

wherein a set of the inputs map to commands of the application (e.g., Page 44, Line 17 – Page 45, Line 27); and

wherein the symbol gestures are logically associated with names of the commands (e.g., Page 44, Line 17 – Page 45, Line 27).

Grounds of Rejection to be Reviewed on Appeal

Appellants request that the Board review the Examiner's rejection of Claims 1-4, 7-11, and 13-21 under 35 U.S.C. 102(b) as being anticipated by WO 2003/001340 to Mosttov ("Mosttov").

Argument

The Examiner rejects Claims 1-4, 7-11, and 13-21 under 35 U.S.C. 102(b) as being anticipated by WO 2003/001340 to Mosttov ("Mosttov").

The Examiner's Rejections of Claims 1-4, 7-11 and 13-21 are Improper

Claim 1 recites:

A motion controlled handheld device comprising:
a display having a viewable surface and operable to generate an image;
a gesture database maintaining a plurality of gestures, each gesture defined by a motion of the device with respect to a first position of the device, the gestures comprising symbol gestures each corresponding to a character from a preexisting character set;
an application database maintaining at least one application;
a gesture mapping database comprising a gesture input map for the application, the gesture input map comprising mappings of the symbol gestures to corresponding inputs for the application;
a motion detection module operable to detect motion of the handheld device within three dimensions and to identify components of the motion in relation to the viewable surface;
a control module operable to load the application, to track movement of the handheld device using the motion detection module, to compare the tracked movement against the symbol gestures to identify a matching symbol gesture, to identify, using the gesture input map, the corresponding input mapped to the matching symbol gesture, and to provide the corresponding input to the application;
wherein a set of the inputs map to commands of the application; and
wherein the symbol gestures are logically associated with names of the commands.

Thus, Claim 1 recites "wherein a set of the inputs map to commands of the application" and "wherein the symbol gestures are logically associated with names of the commands." Claims 9, 15, and 21 recite similar elements. The Examiner suggests that *Mosttov* teaches these elements. *See* Office Action, page 9. In particular, the Examiner states that:

Mosttov teaches a set of the inputs map to commands of the application (pages 8, lines 8-11), and page 8, lines 1-11 of *Mosttov* also teaches the symbol gestures are logically associated with names of the commands (e.g., keystroke "x" is name of a command for entering the keystroke "x" within an application).

Office Action, page 9. The Examiner also states with respect to *Mosttov* that "the 'x-gesture' is logically associated with a command named 'keystrode x.'" *Id.*, page 10.

Mosttov discloses a gesture recognition system and method. *See Mosttov*, Title and Abstract. The portion of *Mosttov* relied on by the Examiner as disclosing the claim elements "wherein a set of the inputs map to commands of the application" and "wherein the symbol gestures are logically associated with names of the commands" discloses the receipt of gestures by a parser 24 of an electronic device and states:

Once the parser 24 identifies the gesture, it generates a token 26 that is directed to an application 28 running on the electronic device 10. The tokens generated by parser 26 represent specific gestures, but the command or data represented by the tokens are left undefined. Instead, the tokens are interpreted by the application 28 (although the tokens might have default interpretations given by an operating system or by the parser, e.g., an 'x-gesture' is interpreted as the keystroke 'x'). This permits different applications to assign different actions or meanings to the tokens. For example, one application can assign a token for a shaking motion to a command to close the application, whereas another application can assign a token for a shaking motion to a data input, such as a letter or number.

Mosttov, page 8, lines 2-11.

The portion of *Mosttov* quoted above thus discloses the receipt of a gesture (such as a keystroke or a shaking motion), and the assignment of the gesture to either a command or to data input such as a letter or number. There is no disclosure that a symbol gesture is logically associated with a name of an application command. As indicated above, the Examiner relies on the disclosure that an x-gesture can be interpreted as a "keystroke 'x'" as disclosing this claim element. However, a keystroke "x" is merely the name of a keystroke and not the name of an application command. Appellants' specification provides examples of names of application commands, such as a command for "copying" data corresponding to a C-gesture, a command for "opening" a file corresponding to an O gesture, and a command for "deleting" data corresponding to a D-gesture. *See Specification*, page 44, lines 17-26.

Moreover, *Mosttov* clearly supports the contention that keystroke "x" is not the name of an application command. As indicated above, *Mosttov* states "one application can assign a token for a shaking motion to a command to close the application, whereas another

application can assign a token for a shaking motion to a data input, such as a letter or number." *Mosttov*, page 8, lines 9-11 (emphasis added). Thus, *Mosttov* specifically distinguishes between a "command" and "data input, such as a letter or number" (e.g., letter "x"). There is no disclosure that the x-gesture or any other gesture in *Mosttov* is logically associated with a name of a command. Therefore, while *Mosttov* may disclose an x-gesture corresponding to data input of keystroke "x," it does not disclose a symbol gesture logically associated with a name of an application command.

For at least these reasons, Appellants respectfully submit that Claims 1, 9, 15 and 21 are patentable over the cited art used in the rejections and request that the Board overturn the rejections of these claims.

Claims 2-4 and 7-8 each depends from Claim 1, Claims 10-11 and 13-14 each depends from Claim 9 and Claims 16-20 each depends from Claim 15. Thus, for at least the reasons discussed above with respect to Claims 1, 9 and 15, Appellants respectfully request that the Board overturn the rejections of Claims 2-4, 7-8, 10-11, 13-14 and 16-20.

CONCLUSION

Appellants have demonstrated that the present invention, as claimed, is clearly distinguishable over the prior art cited by the Examiner. Therefore, Appellants respectfully request the Board of Patent Appeals and Interferences to reverse the Examiner's final rejection of the pending claims and instruct the Examiner to issue a notice of allowance of all pending claims.

The Commissioner is hereby authorized to charge \$500.00 in payment for this Appeal Brief, any other fee and credit any overpayment, to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,
BAKER BOTT S L.L.P.
Attorneys for Appellants



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Date: August 24, 2007

CORRESPONDENCE ADDRESS:

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Appendix A: Claims on Appeal

Claims

1. (Previously Presented) A motion controlled handheld device comprising:
 - a display having a viewable surface and operable to generate an image;
 - a gesture database maintaining a plurality of gestures, each gesture defined by a motion of the device with respect to a first position of the device, the gestures comprising symbol gestures each corresponding to a character from a preexisting character set;
 - an application database maintaining at least one application;
 - a gesture mapping database comprising a gesture input map for the application, the gesture input map comprising mappings of the symbol gestures to corresponding inputs for the application;
 - a motion detection module operable to detect motion of the handheld device within three dimensions and to identify components of the motion in relation to the viewable surface;
 - a control module operable to load the application, to track movement of the handheld device using the motion detection module, to compare the tracked movement against the symbol gestures to identify a matching symbol gesture, to identify, using the gesture input map, the corresponding input mapped to the matching symbol gesture, and to provide the corresponding input to the application;
 - wherein a set of the inputs map to commands of the application; and
 - wherein the symbol gestures are logically associated with names of the commands.
2. (Original) The motion controlled handheld device of Claim 1, wherein the preexisting character set comprises a written character set.
3. (Original) The motion controlled handheld device of Claim 2, wherein the written character set comprises alphanumeric characters.
4. (Original) The motion controlled handheld device of Claim 2, wherein the written character set comprises pictographic characters.

5. (Canceled)

6. (Canceled)

7. (Original) The motion controlled handheld device of Claim 1, wherein each symbol gesture is defined by a single continuous sequence of accelerations defined with respect to the first position.

8. (Original) The motion controlled handheld device of Claim 1, further comprising:

a first accelerometer operable to detect acceleration along a first axis;

a second accelerometer operable to detect acceleration along a second axis, the second axis perpendicular to the first axis; and

a third accelerometer operable to detect acceleration along a third axis, the third axis perpendicular to the first axis and perpendicular to the second axis; and wherein:

the gesture database further defines each of the gestures using a sequence of accelerations;

the motion detection module is further operable to detect motion of the device using accelerations measured by the first accelerometer, the second accelerometer, and the third accelerometer; and

the control module is further operable to match the accelerations measured by the motion detection module against gesture definitions in the gesture database to identify particular ones of the gestures.

9. (Previously Presented) A method for controlling a handheld device comprising:

generating an image on a viewable surface of the handheld device;

maintaining a gesture database comprising a plurality of gestures, each gesture defined by a motion of the device with respect to a first position of the device, the gestures comprising symbol gestures each corresponding to a character from a preexisting character set;

maintaining an application database comprising at least one application;

maintaining a gesture mapping database comprising a gesture input map for the application, the gesture input map comprising mappings of the symbol gestures to corresponding inputs for the application;

loading the application;

tracking movement of the handheld device in relation to the viewable surface;

comparing the tracked movement against the symbol gestures to identify a matching symbol gesture;

identifying, using the gesture input map, the corresponding input mapped to the matching symbol gesture;

providing the corresponding input to the application;

wherein a set of the inputs map to commands of the application; and

wherein the symbol gestures are logically associated with names of the commands.

10. (Original) The method of Claim 9, wherein the preexisting character set comprises a written character set.

11. (Original) The method of Claim 10, wherein the written character set comprises elements selected from a set of alphanumeric characters and a set of pictographic characters.

12. (Canceled)

13. (Original) The method of Claim 9, wherein each symbol gesture is defined by a single continuous sequence of accelerations defined with respect to the first position.

14. (Original) The method of Claim 9, wherein the gesture database further defines each of the gestures using a sequence of accelerations; the method further comprising:

detecting acceleration along a first axis;

detecting acceleration along a second axis, the second axis perpendicular to the first axis; and

detecting acceleration along a third axis, the third axis perpendicular to the first axis and perpendicular to the second axis;

detecting motion of the device using accelerations measured by the first accelerometer, the second accelerometer, and the third accelerometer; and

matching the accelerations against gesture definitions in the gesture database to identify potential indicated ones of the gestures.

15. (Previously Presented) Logic for controlling a handheld device, the logic embodied as a computer program stored on a computer readable medium and operable when executed to perform the steps of:

generating an image on a viewable surface of the handheld device;

maintaining a gesture database comprising a plurality of gestures, each gesture defined by a motion of the device with respect to a first position of the device, the gestures comprising symbol gestures each corresponding to a character from a preexisting character set;

maintaining an application database comprising at least one application;

maintaining a gesture mapping database comprising a gesture input map for the application, the gesture input map comprising mappings of the symbol gestures to corresponding inputs for the application;

loading the application;

tracking movement of the handheld device in relation to the viewable surface;

comparing the tracked movement against the symbol gestures to identify a matching symbol gesture;

identifying, using the gesture input map, the corresponding input mapped to the matching symbol gesture;

providing the corresponding input to the application;

wherein a set of the inputs map to commands of the application; and

wherein the symbol gestures are logically associated with names of the commands.

16. (Original) The logic of Claim 15, wherein the preexisting character set comprises a written character set.

17. (Original) The logic of Claim 16, wherein the written character set comprises alphanumeric characters.

18. (Original) The logic of Claim 16, wherein the written character set comprises pictographic characters.

19. (Original) The logic of Claim 15, wherein each symbol gesture is defined by a single continuous sequence of accelerations defined with respect to the first position.

20. (Original) The logic of Claim 15, wherein the gesture database further defines each of the gestures using a sequence of accelerations; the logic further operable when executed to perform the steps of:

detecting acceleration along a first axis;

detecting acceleration along a second axis, the second axis perpendicular to the first axis; and

detecting acceleration along a third axis, the third axis perpendicular to the first axis and perpendicular to the second axis;

detecting motion of the device using accelerations measured by the first accelerometer, the second accelerometer, and the third accelerometer; and

matching the accelerations against gesture definitions in the gesture database to identify potential indicated ones of the gestures.

21. (Previously Presented) A motion controlled handheld device comprising:
means for generating an image on a viewable surface of the handheld device;
means for maintaining a gesture database comprising a plurality of gestures, each
gesture defined by a motion of the device with respect to a first position of the device, the
gestures comprising symbol gestures each corresponding to a character from a preexisting
character set;
means for maintaining an application database comprising at least one application;
means for maintaining a gesture mapping database comprising a gesture input map for
the application, the gesture input map comprising mappings of the symbol gestures to
corresponding inputs for the application;
means for loading the application;
means for tracking movement of the handheld device in relation to the viewable
surface;
means for comparing the tracked movement against the symbol gestures to identify a
matching symbol gesture;
means for identifying, using the gesture input map, the corresponding input mapped to
the matching symbol gesture;
means for providing the corresponding input to the application;
wherein a set of the inputs map to commands of the application; and
wherein the symbol gestures are logically associated with names of the commands.

ATTORNEY DOCKET NO.
073338.0193
(04-50465 FLA)

PATENT APPLICATION
10/807,572

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Appendix B: Evidence

NONE